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Renewable Energy Development for WTO Member Nations

Rick A. Waltman, Esq.

I. Introduction

Greenhouse gas-induced climate change is an almost unanimously recognized global threat.¹ Accordingly, producing more energy from emission-free renewable resources is a common goal for nations focused on minimizing climate change and its effects.² As the world continues to shift from fossil fuels to renewable fuels, national and local policymakers are looking for ways to encourage the transition.³ Obligations under multilateral agreements, such as those under World Trade Organization (WTO) agreements, present constraints that these policymakers must consider.⁴

Renewable energy policies have already attracted sanctions for violating rules set out by WTO agreements. The challenges largely rest on violations of the General Agreement on Tariffs and Trade (GATT), the Agreement on Subsidies and Countervailing Measures (SCM Agreement), and the Agreement on Trade Related Investment Measures (TRIMs Agreement).⁵ The principles embodied in these agreements, and their application to previous WTO Member actions, provide insight for policymakers to consider when constructing policies aimed at renewable energy development. That insight is the focus of this Article.

Section II of this Article outlines the anti-discrimination and anti-favoritism principles contained in the GATT, SCM Agreement, and TRIMs Agreement as well as potential defenses under Article XX of the GATT. Section III explains how the rules under these agreements have been applied in previous challenges to renewable energy programs and considers the viability of the GATT Article XX exceptions to

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1. Intergovernmental Panel on Climate Change [IPCC], *Climate Change 2014 Synthesis Report*, at v (Nov. 1, 2014), <http://www.ipcc.ch/report/ar5/syr/>; See also U.S. NAT'L ACAD. OF SCI. ET AL, JOINT SCIENCE ACADEMIES STATEMENT, GLOBAL RESPONSE TO CLIMATE CHANGE (2005), <http://nationalacademies.org/onpi/06072005.pdf>.
 2. *Renewable Energy Standards—Mitigating Global Warming*, UNION OF CONCERNED SCIENTISTS, http://www.ucsusa.org/clean_energy/smart-energy-solutions/increase-renewables/renewable-energy.html#.VU0yJ_IViko (last visited April 30, 2015); EUR. RENEWABLE ENERGY COUNCIL, RENEWABLE ENERGY: THE SOLUTION TO CLIMATE CHANGE 9, 13 (2010), http://www.seai.ie/Publications/Renewables_Publications/_Energy_RD_D/RESolutiontoclimatechange.pdf.
 3. Charles Kenny, *If Everyone Gets Electricity, Can the Planet Survive?*, THE ATLANTIC (Sept. 28, 2015), <http://www.theatlantic.com/international/archive/2015/09/energy-access-sdgs-un-climate-change/407734/>; Coral Davenport & Gardiner Harris, *Citing Urgency, World Leaders Converge on France for Climate Talks*, N.Y. TIMES (Nov. 30, 2015), http://www.nytimes.com/2015/12/01/world/europe/obama-climate-conference-cop21.html?_r=0; Chris Mooney, *Clean Energy Growth is "Off Track" to Avert Climate Change, says Energy Agency*, WASH. POST: ENERGY & ENV'T. (Oct. 2, 2014), <https://www.washingtonpost.com/news/energy-environment/wp/2015/10/02/why-the-world-could-be-shifting-to-clean-energy-a-lot-faster/>.
 4. See *infra* Sections II and III of this Article for discussions of the important rules under the WTO agreements.
 5. See *infra* Section III for a discussion of specific disputes that raise complaints under the GATT, the SCM Agreement, and the TRIMs Agreement.

future programs. Finally, Section III discusses the lessons learned from analysis of the agreements and prior disputes in the context of future policymaking decisions. Though Member nations could institute any number of WTO-compliant renewable energy policies, this Article discusses nationality-neutral measures for renewable development, stimulus for renewable energy component manufacturers, subsidies and benefits for service providers, and reductions in fossil fuel subsidies.

II. World Trade Organization Rules

The World Trade Organization (WTO), agreed upon by 123 signatory countries on April 15, 1994, took effect on January 1, 1995.⁶ The WTO establishes rules to facilitate open international markets and provides arenas for negotiating trade agreements and resolving disputes between Members of those agreements.⁷ Conflicts that arise under a WTO agreement can be settled privately between Member nations or through WTO consultations, and, if settlement negotiations fail, a WTO Panel might hear the matter.⁸ If the WTO determines that a Member has violated one or more of its agreements, it can demand compliance, institute countervailing duties, or allow the challenging Member party to inflict its own sanctions.⁹

The WTO took the place of multiple separate agreements negotiated since the 1947 GATT.¹⁰ The GATT persists as amended in 1994 and is joined by over thirty international agreements and over six hundred regional agreements that lay out the rules of trade for Members nations.¹¹ Although many agreements under the WTO and other intergovernmental organizations affect renewable energy markets, not all

6. U.N. INFO. & EXTERNAL REL. DIV., UNDERSTANDING THE WTO, at 18, U.N. (2015), available at https://www.wto.org/english/thewto_e/whatis_e/tif_e/understanding_e.pdf.

7. *The GATT Years: from Havana to Marrakesh*, WORLD TRADE ORGANIZATION, https://www.wto.org/english/thewto_e/whatis_e/tif_e/fact4_e.htm (last visited Aug. 29, 2015) [hereinafter *The GATT Years: from Havana to Marrakesh*]; Marrakesh Agreement Establishing the World Trade Organization art. 3, Apr. 15, 1994, 1867 U.N.T.S. 154.

8. David Palmeter, *The WTO as a Legal System*, 24 FORD. INT'L L. J. 444, 468, (2000); Understanding on Rules and Procedures Governing the Settlement of Disputes, Annex 2, arts. 4, 5, Apr. 15, 1994, [hereinafter Dispute Settlement Understanding] (appeals from Panel decisions can be heard by the WTO Appellate Body).

9. *Id.* arts. 21, 22.

10. See *The GATT Years: from Havana to Marrakesh*, *supra* note 7.

11. General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT]. The 1947 agreement is still in effect, subject to the 1994 amendments. General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, 1867 U.N.T.S. 187, 33 I.L.M. 1153 (1994); *The WTO In Brief Part 3: The WTO Agreements*, WORLD TRADE ORGANIZATION, https://www.wto.org/english/thewto_e/whatis_e/inbrief_e/inbr03_e.htm (last visited on Sept. 1, 2015).

can be discussed in this article.¹² The GATT, the TRIMs Agreement, and the SCM Agreement¹³ impose constraints that are especially relevant to renewable energy markets. These agreements are discussed in turn.

A. GATT

The GATT applies to “production and exchange of goods” among Members, as is distinguishable from trade in services, which is covered by the General Agreement on Trade in Services (GATS).¹⁴ Its purpose is to facilitate a “substantial reduction of tariffs and other trade barriers and the elimination of preferences, on a reciprocal and mutually advantageous basis.”¹⁵ Within the GATT, Articles I, III, and XX are most important to a contemporary understanding of energy markets in the WTO. Article I imposes a “most-favoured nation” requirement on Members, Article III prohibits discrimination against imports, and Article XX includes important exceptions.

1. Principles of non-discrimination

Article I of the GATT imposes a requirement that each Member treat all other Members alike.¹⁶ Members must treat all other Members as a “most-favoured nation,” so any trade concessions or benefits allowed to one Member must unconditionally apply to all others.¹⁷ Article III requires Member states to treat imports from other member nations similarly to all “like” domestic goods.¹⁸ This “national” treatment command applies to all internal regulations, taxes, and any

12. For example, the General Agreement on Trade in Services (GATS), the Trade Related Intellectual Property (TRIPs), and the Government Procurement Agreement (GPA) might apply to disputes over renewable energy programs. See Joanna I. Lewis, *The Rise of Renewable Energy Protectionism: Emerging Trade Conflicts and Implications for Low Carbon Development*, 14 GLOBAL ENVTL. POL. 10, 12 (2014) (discussing the TRIPs and GPA). However, these agreements include similar constraints as those discussed in the GATT, SCM Agreement, and TRIMs Agreement, and would not likely change the outcome of the scenarios discussed in this article.

13. GATT, *supra* note 11; Agreement on Subsidies and Countervailing Measures, Apr. 15, 1994, 1869 U.N.T.S. 14 [hereinafter SCM].

14. GATT, *supra* note 11, Preamble.

15. *Id.*

16. GATT, *supra* note 11, art. I.

17. *Id.* This “most-favoured nation” treatment has been included in international treaties, including GATT, for decades before 1994 amendment adopted it. See *Most-Favoured-Nation Treatment Principle*, MINISTRY OF ECON., TRADE AND INDUSTRY, <http://www.meti.go.jp/english/report/download-files/gCT0212e.pdf> (last visited Feb 26, 2016).

18. GATT, *supra* note 11, art. III(4). Any advantage or benefit available to domestic goods must also be afforded to imports. Some exceptions are available for developing countries under certain conditions. *Id.* art. I(2).

measures that affect the prices of imports or exports.¹⁹ These measures cannot be used as substitutes for tariffs by discriminating against imported goods.²⁰ The TRIMs agreement incorporates GATT Article III's "national" treatment standard, as is addressed further in Section II below.

These principles of non-discrimination and non-favoritism drive many challenges to state action in the WTO. However, the GATT does offer multiple exceptions, most of which are found in Article XX.

2. Article XX Exceptions

GATT Article XX includes multiple narrow exceptions that provide immunity from all of the GATT's constraints.²¹ Exceptions available for policies aimed at protecting natural resources and/or human health, under Articles XX(b) and XX(g), may be especially important for renewable energy development efforts.²² However, measures taken in reliance on one of these exceptions must be narrowly drawn. All of the Article XX exceptions must satisfy Article XX's introductory paragraph, or its "chapeau"—the government action must not amount to a "means of arbitrary or unjustifiable discrimination" or a "disguised restriction on international trade."²³

a) XX(b) exception for protecting human, animal, and plant health

Article XX(b) of the GATT exempts Members from the agreement's rules for policies that are "necessary to protect human, animal or plant life or health."²⁴ This exception might apply to certain climate change mitigation measures, as climate change poses huge potential risks to human, animal, and plant life.²⁵ However,

19. *Id.*, art. III(4).

20. *Id.*

21. *Id.*, art. XX.

22. *Id.*, arts. XX(g), XX(b).

23. *Id.*, art. XX.

24. *Id.*, art. XX(b).

25. See *Climate Change Threats and Impacts*, THE NATURE CONSERVANCY, <http://www.nature.org/our-initiatives/urgentissues/global-warming-climate-change/threats-impacts/> (last visited Nov. 7, 2015) ("With rapid climate change, one-fourth of Earth's species could be headed for extinction by 2050."; see *Climate Change 2014: Impacts, Adaptation, and Vulnerability*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (2014), <http://www.ipcc.ch/report/ar5/wg2/>; see *The Consequences of Climate Change*, NAT'L AERONAUTICS AND SPACE ADMIN.: GLOBAL CLIMATE CHANGE, <http://climate.nasa.gov/effects/> (last updated Jan. 26, 2016).

measures taken to this end must be “necessary” to prevent the risk.²⁶

To determine whether a risk to human, animal, or plant life exists, a WTO panel can consider evidence from scientific reports or expert testimony.²⁷ In the dispute of *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products (EC–Asbestos)*, the WTO Appellate Body reviewed a lower Panel’s application of GATT Article XX(b) to France’s trade embargos on asbestos products.²⁸ The Panel determined that asbestos posed a risk to human health based on evidence gathered from expert testimony and reports indicating such a risk, but did not quantify the degree of the risk.²⁹ The Appellate Body noted that “after the European Communities had established a prima facie case for the existence of a health risk in connection with the use of chrysotile, Canada [the challenger] bore the burden of refuting that case by showing the absence of such a health risk.”³⁰

State action is only “necessary,” for purposes of Article XX(b), if no “alternative measures either consistent or less inconsistent” with the GATT are available.³¹ Notably, a Member must show more than a mere administrative burden to establish that an alternative is unavailable.³² The WTO Appellate Body in *EC–Asbestos* held that “[t]he more vital or important [the] common interests or values’ pursued [are], the easier it would be to accept as ‘necessary’ measures designed to achieve those ends.”³³

b) XX(g) exception for conserving natural resources

GATT Article XX(g) provides an exception for policies “relating to the conservation of exhaustible natural resources, if such measures are made in conjunction with restrictions on domestic production or consumption.”³⁴ A WTO Member seeking to invoke Article XX(g) must demonstrate: (1) that it aims to

26. Report of the Panel, *United States – Standards for Reformulated and Conventional Gasoline*, ¶ 6.20, WT/DS2/R, (Jan. 29, 1996) [hereinafter *U.S.–Gasoline*], available at https://www.wto.org/english/tratop_e/dispu_e/2-9.pdf.

27. See Appellate Body Report, *European Communities–Measures Affecting Asbestos and Asbestos-Containing Products*, ¶¶ 163–66, WT/DS135/AB/R (Mar. 12, 2001) [hereinafter *EC–Asbestos*], available at https://www.wto.org/english/tratop_e/dispu_e/135abr_e.pdf.

28. *See id.*

29. *Id.*, ¶ 162.

30. *Id.*, ¶ 27.

31. *U.S.–Gasoline*, *supra* note 26, at 16.

32. See Appellate Body Report, *United States – Standards for Reformulated and Conventional Gasoline*, art. 31, WT/DS2/AB/R (Apr. 29, 1996) [hereinafter *U.S.–Gasoline Appellate Report*], available at https://www.wto.org/english/tratop_e/dispu_e/2-9.pdf.

33. *EC–Asbestos*, *supra* note 27, ¶ 172.

34. GATT, *supra* note 11, art. XX(g).

conserve exhaustible natural resources; (2) its policy must “relate” to such conservation; and (3) any restrictions on international trade must be made “in conjunction with restrictions on domestic production or consumption.”³⁵

Clean air is one example of an exhaustible natural resource.³⁶ In the *United States–Standards for Reformulated and Conventional Gasoline (U.S.–Gasoline)* dispute, a WTO Panel held that United States Environmental Protection Agency’s Clean Air Act regulations that targeted gasoline ozone emissions were protected under the GATT Article XX (g) exception.³⁷ The Panel specifically held that clean air constitutes an exhaustible natural resource, so “a policy to reduce the depletion of clean air was a policy to conserve a natural resource within the meaning of Article XX (g).”³⁸

GATT-exempted measures under Article XX(g) must “relat[e] to” their goal of conservation.³⁹ Moreover, the WTO Appellate Body holds that the state action must be “primarily aimed at” conservation, and the implementation must be “reasonably related to the ends.”⁴⁰ To establish that a measure is “primarily aimed at” conservation and “reasonably related to” its ends, a Member must show a close “relationship between the general structure and design of the measure” and the policy goal of conservation.⁴¹

Lastly, a policy must apply equally to foreign and domestic products. Article XX(g) requires “even-handedness in the imposition of restrictions, in the name of conservation, upon the production or consumption of exhaustible natural resources.”⁴² Programs that explicitly treat domestic and foreign producers

35. *Id.*; *U.S.–Gasoline*, *supra* note 26, ¶ 6.35.

36. *Id.*, ¶ 6.37.

37. *Id.*

38. *Id.* (agreeing with the U.S. argument that certain pollutants could deplete air quality over time); The Appellate Body reversed the Panel decision on separate grounds. *See U.S.–Gasoline Appellate Report*, *supra* note 32, at 29. The complainants did not appeal the finding of clean air as an exhaustible natural resource, so Appellate Body did not address the Panel’s decision regarding this issue. *See id.* at 14–19.

39. GATT, *supra* note 11, art. XX(g).

40. *U.S.–Gasoline*, *supra* note 26, ¶ 6.39; *see also* Report of the Panel, *Canada–Measures Affecting Exports of Unprocessed Herring and Salmon*, ¶ 4.4, L/6268 (Nov. 20, 1987), GATT B.I.S.D. (35th Supp.) at 98 (1988) [hereinafter *Canada–Herring and Salmon*], available at https://www.wto.org/english/tratop_e/dispu_e/87hersal.pdf; *see also* Appellate Body Report, *United States–Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 141, WT/DS58/AB/R (Oct. 12, 1998) [hereinafter *U.S.–Shrimp–Turtle*], available at [https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S006.aspx?Query=\(Symbol=%20wt/ds58/ab/r*%20not%20rw*\)&Language=ENGLISH&Context=FomerScriptedSearch&languageUIChanged=true#](https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S006.aspx?Query=(Symbol=%20wt/ds58/ab/r*%20not%20rw*)&Language=ENGLISH&Context=FomerScriptedSearch&languageUIChanged=true#) (holding that endangered sea turtles are an exhaustible natural resource).

41. *U.S.–Shrimp–Turtle*, *supra* note 40, ¶ 137.

42. *See U.S.–Gasoline Appellate Report*, *supra* note 32, at 21; *U.S.–Shrimp–Turtle*, *supra* note 40, ¶ 143. The Panels in *U.S.–Gasoline* and *U.S.–Shrimp* found that, because the Member regulations applied

differently are not “even-handed.”⁴³ This requirement works in tangent to Article III’s national treatment standard, so Members may find difficulty in citing the Article XX(g) as an exception to clear Article III infractions.

c) *Chapeau*

Apart from the requirements under each specific GATT Article XX exemption, the chapeau to Article XX negates any applicable exemptions if the policy in question “constitute[s] a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade.”⁴⁴ The chapeau was included to prevent “abuse of the exceptions.”⁴⁵

There is little guidance for applying the chapeau’s standard. On one extreme, any explicit ban or overtly discriminatory limitation on some markets over others will fail under the chapeau, if it does not already fail under Article XX(g)’s “even-handedness” requirement.⁴⁶ Moreover, a Member invoking an Article XX exception must do more than show that its policy serves some “justifiable purpose”; it must also demonstrate that the measure is equally or less burdensome than other approaches to serving that justifiable purpose.⁴⁷

If a trade incentive or sanction includes any qualifications that result in discriminatory effect—even incidentally—on the geographic origin of goods, that trade incentive might not qualify for the Article XX exceptions either.⁴⁸ In *United States–Import Prohibition of Certain Shrimp and Shrimp Products (U.S.–Shrimp Turtle)*, the United States required permits for importers of tuna, and only granted permits to those who used United States-approved turtle protecting devices.⁴⁹ Importers who used “comparably effective” protections were meanwhile excluded.⁵⁰ Although endangered turtles were considered an exhaustible natural resource under Article XX(g), the WTO Panel found that the equipment requirement was both discriminatory and unjustified and thus violated the chapeau.⁵¹ Although *U.S.*

to both domestic and foreign producers, they were even-handed. See *U.S.–Gasoline Appellate Report*, *supra* note 32, at 21; *U.S.–Shrimp-Turtle*, *supra* note 40, ¶ 27.

43. *U.S.–Gasoline Appellate Report*, *supra* note 32, at 20–21.

44. GATT, *supra* note 11, Article XX

45. WORLD TRADE ORG., ANALYTICAL INDEX OF THE GATT, *available at* https://www.wto.org/english/res_e/booksp_e/gatt_ai_e/art20_e.pdf (last visited October 18, 2015).

46. See *supra* section above for discussion of Article XX(g). Such a discriminatory practice would also run afoul of the SCM agreement, discussed in the next section.

47. *Id.* In this sense, it is akin to the “necessary” requirement under Article XX(b). See *supra*, Section II.A.2.a.

48. *U.S.–Shrimp-Turtle*, *supra* note 40, ¶ 184.

49. *Id.*

50. *Id.*

51. *Id.*

–*Shrimp Turtle* prohibited the United States shrimp embargo under Article XX’s chapeau, some experts note that the report is a “landmark decision” that indicates a “departure from past decisions in tone and reasoning.”⁵² Because the Panel’s reasoning allows for some narrowly tailored measures aimed at protecting health and natural resources, it “signals a positive trend in international trade law for using unilateral trade bans to protect the environment.”⁵³

The GATT’s Article XX exceptions negate Members’ violations of both the GATT and the TRIMs Agreement.⁵⁴ However, Article XX does not likely apply to the SCM Agreement, which applies to product subsidies specifically.⁵⁵

B. *The Agreement on Subsidies and Countervailing Measures*

The SCM Agreement prohibits or allows sanctions for certain government subsidies.⁵⁶ “Subsidies” under the SCM Agreement include financial contributions or any measures that benefit exporting domestic goods or otherwise harm importing foreign goods.⁵⁷ Any “subsidy” under Article XVI of the GATT also is subject to the SCM Agreement.⁵⁸ If a Member limits access to subsidies for “certain industries or enterprises” or a “designated geographic region,” the SCM Agreement deems it a “specific subsidy,” and the subsidy is scrutinized further to determine whether it complies with the agreement’s rules.⁵⁹ “Specific” subsidies may be outright

52. Richard W. Parker, *The Use and Abuse of Trade Leverage to Protect the Global Commons: What We Can Learn from the Tuna-Dolphin Conflict*, 12 GEO. INT’L ENVTL. L. REV. 1, 5 (1999); Dukgeun Ahn, *Environmental Disputes in the GATT/WTO: Before and After U.S. Shrimp Case*, 20 MICH. J. INT’L L. 819, 822 (1999).

53. Brett Grosko, *Note, Just When Is It That a Unilateral Trade Ban Satisfies the GATT?: The WTO Shrimp and Shrimp Products Case*, 5 ENVTL. L. 817, 840-41 (1999).

54. *See infra* Section II.C. for a discussion of the TRIMs Agreement.

55. The SCM Agreement initially included an environmental exception, but the exception expired in 1999. *Dispute Settlement, World Trade Organization: Subsidies and Countervailing Measures*, UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT 17 (2003), available at http://www.unctad.org/en/docs/edmmisc232add15_en.pdf. Some argue that the GATT Article XX exceptions apply broadly to all agreements it overlaps with. *See* Paolo Davide Farah and Elena Cima, *The World Trade Organization, Renewable Energy Subsidies, and the Case of Feed-in Tariffs: Time for Reform toward Sustainable Development*, GEORGETOWN INT’L ENVTL. L. REV. 515, 534 (2015) (discussing the arguments in favor of allowing GATT Article XX exceptions for violators of the SCM Agreement). However, no Panel has ever ruled on such an extension of the GATT exceptions, and no Member has ever asserted such an exception; the exceptions cannot be safely relied upon for subsidies. *Id.*

56. SCM, *supra* note 13, art. 1.1(a)(1).

57. *Id.* at 229. For example, tax credits, grants, loans, guarantees, foregone revenues, and price support are explicitly included in the agreement.

58. *Id.* A subsidy exists if “there is any form of income or price support in the sense of Article XVI of GATT 1994.”

59. *Id.* art. 1.2. “A subsidy as defined in paragraph 1 shall be subject to the provisions of Part II or shall be subject to the provisions of Part III or V only if such a subsidy is specific in accordance with the

“prohibited” pursuant to Part II, or they may be “actionable” under Part III and subject to countervailing measures.⁶⁰

1. *Prohibited Subsidies*

Two types of specific subsidies are prohibited per se by the SCM Agreement: those that require “the use of domestic products over imported goods” and those that are granted based on “export performance,” whether explicitly by law or in effect.⁶¹ If the WTO determines that a specific subsidy falls into either of these categories, the subsidizing Member must cease the program. The United States, the European Union, and Japan all challenged some of China’s renewable energy subsidies under this provision in 2010.⁶² This settlement is discussed further in Section III below. Subsidies that are not categorically prohibited warrant lesser restriction.

2. *Actionable Subsidies*

Subsidies are “actionable” under the SCM Agreement if they result in “adverse effects to the interests of other Members.”⁶³ Articles 5(a)-(c) provide that such “adverse effects” exist if the subsidies cause “injury to the domestic industry of another WTO Member,” the “nullification or impairment” of benefits accrued under the GATT, or result in “serious prejudice to the interests of another Member.”⁶⁴

Article 15.7 of the SCM Agreement goes on to prompt investigating authorities to consider, among other things, the following factors when determining “whether a subsidy causes injury”: (i) the “nature” of and trade effects likely to result from the subsidy; (ii) “a significant rate of increase of subsidized imports into the domestic market indicating the likelihood of substantially increased importation”; (iii) an

provisions of Article 2.” Part II concerns “prohibited subsidies,” Part III includes “actionable” subsidies,” and Part V discusses “countervailing measures” other Members can take against an infringing Member.

60. *Id.* at 231-241.

61. *Id.*

62. Petition for Relief Under Section 301 of the Trade Act of 1974, as Amended: *China’s Policies Affecting Trade and Investment in Green Technology*, (Sept. 9, 2010) [hereinafter China Petition], available at <https://ustr.gov/sites/default/files/09-09-2010%20Petition.pdf>; Press Release, Office of the U.S. Trade Representative, United States Requests WTO Dispute Settlement Consultations on China’s Subsidies for Wind Power Equipment Manufacturers (Dec. 2010), <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2010/december/united-states-requests-wto-dispute-settlement-con>; Request to Join Consultations by the European Union, China–Measures Concerning Wind Power Equipment, WT/DS419/2 (Jan. 14, 2011); Request to Join Consultations by Japan, China–Measures Concerning Wind Power Equipment, WT/DS419/3 (Jan. 19, 2011).

63. SCM, *supra* note 13, at 233.

64. *Id.*

imminent, substantial increase in exports to complainant's domestic market, "taking into account the availability of other export markets to absorb any additional exports"; (iv) "significant depressing or suppressing effect on domestic prices" that will increase demand for imported goods; and (v) inventories of the products being investigated.⁶⁵

Article 6.3 further specifies that a subsidy results in "serious prejudice" if it (a) "displace[s] or impede[s] the exports of a like product of another Member into the market of the subsidizing Member"; (b) "displaces or [impedes] the exports of a like product of another Member from a third country market"; (c) results in "significant price undercutting by the subsidized product as compared with the price of a like product of another Member in the same market or significant price suppression, price depression or lost sales in the same market"; or (d) increases the world market share of the subsidizing Member's product to a share that exceeds its average share over the previous three years, provided that this increase in market share temporally correlates to the period when subsidies have been granted.⁶⁶ The SCM Agreement states that "serious prejudice" does not exist when the trade imbalance results from a natural disaster or emergency, or when there is a "voluntary decrease in the availability for export of the product concerned from the complaining Member."⁶⁷

Complaining Members can obtain varying degrees of remedial action if they establish that another Member's subsidy is "actionable"—that is, the subsidy either "causes injury" or results in "serious prejudice" to other Members as outlined above. After a WTO Panel or other "investigative body" finds a subsidy "actionable," the subsidizing Member must rectify the injurious effect, eliminate the entire subsidy program if necessary, or else risk being subject to "countervailing measures."⁶⁸ For example, in 2010 the United States International Trade Commission (ITC)

65. *Id.* at 248.

66. *Id.* at 234.

67. *Id.* at 235. SCM Agreement, Article 6.7 in its entirety reads:

"Displacement or impediment resulting in serious prejudice shall not arise under paragraph 3 where any of the following circumstances exist during the relevant period: (a) prohibition or restriction on exports of the like product from the complaining Member or on imports from the complaining Member into the third country market concerned; (b) decision by an importing government operating a monopoly of trade or state trading in the product concerned to shift, for non-commercial reasons, imports from the complaining Member to another country or countries; (c) natural disasters, strikes, transport disruptions or other force majeure substantially affecting production, qualities, quantities or prices of the product available for export from the complaining Member; (d) existence of arrangements limiting exports from the complaining Member; (e) voluntary decrease in the availability for export of the product concerned from the complaining Member (including, inter alia, a situation where firms in the complaining Member have been autonomously reallocating exports of this product to new markets); (f) failure to conform to standards and other regulatory requirements in the importing country."

68. *Id.* SCM part V outlines the process for imposing countervailing measures. *Id.* at 241-254.

instituted tariffs against China's solar producers pursuant to the SCM Agreement's "actionable subsidy" provisions.⁶⁹ The WTO never heard this dispute, but the settlement process is discussed below in Section III. The Agreement states that countervailing measures must be terminated after five years unless the complaining Member can establish that the measures must continue to avoid further injury or "prejudice."⁷⁰

In concurrence with the GATT and the SCM Agreement, the TRIMs Agreement also restricts Members' influence over international markets and domestic protectionism. While the SCM Agreement applies to "specific subsidies" and the GATT regulates "trade barriers" generally, the TRIMs agreement prohibits Members from imposing certain restrictions on private investments.⁷¹

C. *The Agreement on Trade-Related Investment Measures*

The TRIMs Agreement prevents Member countries from conditioning foreign direct investments (FDIs) and other financial resources, including technology transfer requirements, on factors that favor domestic industry over the international market.⁷² The Agreement reflects the principles set out in the GATT and provides "an illustrative list of TRIMs, which are inconsistent with the obligation of national treatment provided in paragraph 4 of Article III of GATT and the obligation of general elimination of quantitative restrictions provided in paragraph 1 of Article XI of GATT 1994."⁷³

Article 2 of the TRIMs Agreement references GATT Article III, and specifies that TRIMs are subject to the GATT "national treatment" standard; both agreements prohibit Members from requiring recipients of benefits to obtain input supplies from domestic sources.⁷⁴ The Annex to the TRIMs Agreement illustrates specific scenarios that violate Article 2.⁷⁵ For example, Members cannot require "the

69. See *infra* Section III.A.1.

70. SCM, *supra* note 13, art. 21.3.

71. See *infra* Section II.C.

72. See Robert H. Edwards, Jr. & Simon N. Lester, *Towards a More Comprehensive World Trade Organization Agreement on Trade Related Investment Measures*, 33 STAN. J. INT'L L. 169, 176–86 (1997) (discussing historical treatment of foreign investments); Joanna I. Lewis, *The Rise of Renewable Energy Protectionism: Emerging Trade Conflicts and Implications for Low Carbon Development*, 14 GLOBAL ENVTL. POL. 1 (2014), available at https://blogs.commons.georgetown.edu/jil9/files/2014/01/Lewis.RE_Intl_Trade_Draft_11.2013.pdf.

73. Agreement on Trade-Related Investment Measures, art. 2.2, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, Legal Instruments – Results of the Uruguay Round vol. 1, 33 I.L.M. 1244 (1994) [hereinafter TRIMs Agreement], available at http://www.wto.org/english/docs_e/legal_e/18-trims_e.htm.

74. *Id.*, art. 2.1; GATT, *supra* note 11, arts. III, XI.

75. TRIMs Agreement, *supra* note 73, Annex.

purchase or use by an enterprise of products of domestic origin or from any domestic source.”⁷⁶ The TRIMs agreement also prohibits Members from requiring that “enterprise[s] purchases or use of imported products be limited to an amount related to the volume or value of local products that it exports.”⁷⁷ As provided by TRIMs agreement Article 3, all of the GATT’s Article XX exceptions apply to the TRIMs agreement.⁷⁸ Exempted measures must satisfy Article XX’s chapeau under both agreements.⁷⁹

The rules laid out by these agreements set the stage for disputes over renewable energy programs in the WTO. The following section briefly discusses some recent renewable energy disputes, and then assesses the applicability of the GATT Articles XX(b) and (g) exceptions.

III. Renewable Energy in the World Trade Organization

Some of the WTO constraints against trade discrimination, discussed in the agreements above, have already been used to sanction renewable energy subsidies and incentive programs. In designing renewable energy policies, nations must consider these instances as well as how they might apply in the future.

A. Discrimination and Favoritism

Renewable energy subsidy programs instituted by the Canadian province of Ontario and China demonstrate current trends in WTO dispute resolution. Other challenges to clean energy policies follow similar patterns.

1. Ontario’s solar subsidies and local content requirements

The Green Energy and Green Economy Act of 2009 (OGEA), enacted by the Canadian province of Ontario, drew the first WTO challenge to a feed-in-tariff (FIT) program for renewable energy.⁸⁰ In 2011, both the European Union (EU) and Japan

76. *Id.*

77. *Id.* TRIMs Agreement Article 2 also incorporates GATT Article XI, which prohibits quantitative restrictions on importers. *Id.*, Article 2.

78. *Id.*, Article 3.

79. *See supra* Section III.A.2. of this article for a discussion of Article XX exceptions and the chapeau’s requirements.

80. Green Energy and Green Economy Act, 2009 S.O. 2009, c. 12 (Can.) [hereinafter OGEA], http://www.e-laws.gov.on.ca/html/source/statutes/english/2009/elaws_src_s09012_e.htm.

challenged the OGEA separately.⁸¹ The presiding WTO Panel merged the two disputes to consider the identical issues under the GATT, the SCM Agreement, and the TRIMs Agreement.⁸² Ultimately, Ontario was forced to remove the local content requirements due to GATT and TRIMs violations.⁸³

Ontario's OGEA offered FITs for development, production, and use of renewable energy in the province.⁸⁴ The law also ensured electric generators access to distribution, long term contracts, and a reasonable profit under state-subsidized power purchase agreements.⁸⁵ The FIT benefits were contingent upon purchasing equipment and other inputs locally.⁸⁶ The EU and Japan both challenged Ontario's FIT program as a violation of the GATT's "most-favoured nation" and "national" treatment provisions, the SCM Agreement's "prohibited subsidy" provision, and the TRIMs Agreement.⁸⁷

The EU and Japan specifically argued that the OGEA's FIT program was inconsistent with the GATT's obligations under Article III.⁸⁸ The parties claimed that the program affected "the internal sale, purchase or use of renewable energy generation equipment and components, according less favourable treatment to like products of European Union origin."⁸⁹ The Panel agreed that the FIT program conflicted with GATT Article III's national treatment standard as well as Article 2 of the TRIMs agreement.⁹⁰ Because the OGEA required renewable energy and equipment producers to utilize a portion of "products of domestic origin" in order to "obtain an advantage," it violated GATT Article III's "national treatment" standard and was prohibited by both the GATT and the TRIMs agreement.⁹¹ Even if Article

81. Request for Consultations by Japan, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS412/1 (Sept. 16, 2010) [hereinafter Japan-Canada WTO Request]; Request for Consultations by the European Union, *Canada – Measures Related to the Feed-In Tariff Program*, WTO Doc. WT/DS426/1 (Aug. 16, 2011) [hereinafter EU-Canada WTO Request].

82. Panel Report, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS412/R (Dec. 19, 2012); Panel Report, *Canada – Measures Relating to the Feed-In Tariff Program*, WTO Doc. WT/DS426/R (Dec. 19, 2012) [hereinafter *Canada-FIT Program*].

83. *Id.*

84. OGEA, *supra* note 80, § 7(4). ("Feed-in tariff program" means a program for procurement, including a procurement process, providing standard program rules, standard contracts and standard pricing regarding classes of generation facilities differentiated by energy source or fuel type, generator capacity and the manner by which the generation facility is used, deployed, installed or located.).

85. *Id.*; *Canada-FIT Program*, *supra*, note 82.

86. OGEA, *supra* note 80, § 7(3). ("the Minister shall issue, and the OPA shall follow in preparing its feed-in tariff program, directions that set out the goals relating to domestic content to be achieved during the period to be covered by the program."); *Canada-FIT Program*, *supra* note 82 (prior to Europe and Japan's challenges, domestic content requirements ranged from 25% to 60%).

87. Japan-Canada WTO Request, *supra* note 81; EU-Canada WTO Request, *supra* note 81.

88. *Canada-FIT Program*, *supra* note 82, ¶ 3.4(c).

89. *Id.* ¶ 3.4.

90. *Id.* ¶ 7.

91. *Id.* ¶ 7.115; TRIMs Agreement, *supra* note 73, Annex, ¶ 1(a).

III of the GATT did not restrict Ontario's use of the OGEA subsidies (it did), the Panel noted that the program fell under the paragraph 1(a) example of the TRIMs Agreement's Annex.⁹² The TRIMs agreement would have thus been a sufficient basis to rule against the OGEA renewable subsidy program.⁹³

2. China's renewable program and export performance requirements

In 2010, the American Federation of Labor and Congress of Industrial Organization (AFL-CIO) challenged China's renewable energy subsidy program for violating the SCM Agreement.⁹⁴ The USW filed a petition with the United States Trade Representative (USTR) alleging that China's "Ride the Wind" subsidy program offered domestic wind and solar manufacturers financial benefits that were contingent upon the manufacturers' use of domestic suppliers and export performance.⁹⁵ To obtain benefits under the program, foreign producers were required to work with local enterprises for renewable development and use local Chinese suppliers.⁹⁶ The petition alleged that these "discriminatory provisions" were prohibited under Articles 1 and 3 of the SCM Agreement.⁹⁷

The USTR concluded that China's program violated the SCM Agreement, and the United States commenced settlement dispute consultation in the WTO.⁹⁸ Rather than rely on a WTO Panel to rule on the dispute, the parties reached a settlement during the WTO consultation proceedings, and China voluntarily removed some of

92. TRIMs Agreement, *supra* note 73, Annex, ¶ 1(a) (a requirement for "the purchase or use by an enterprise of products of domestic origin or from any domestic source, whether specified in terms of particular products, in terms of volume or value of products, or in terms of a proportion of volume or value of its local production" constitutes a violation of TRIMs Agreement).

93. *Canada-FIT Program*, *supra*, note 82, ¶¶ 7.120–7.121 (even though violations of the TRIMs Agreement Annex usually constitute violations of the GATT Article III as well, the Panel noted that it would be "inappropriate to infer from Paragraph 1(a) of the Illustrative List that TRIMs having the characteristics described in that paragraph will always be inconsistent with Article III:4 of the GATT 1994, irrespective of whether they may be covered by the terms of Article III:8(a) of the GATT 1994").

94. China Petition, *supra* note 62.

95. *Id.* at 65.

96. *Id.* at 62–65.

97. *SCM*, *supra* note 13, at art. 1 and 3.

98. Press Release, Office of the U.S. Trade Representative, United States Requests WTO Dispute Settlement Consultations on China's Subsidies for Wind Power Equipment Manufacturers (Dec. 2010), available at <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2010/december/united-states-requests-wto-dispute-settlement-con> (The USTR's finding said nothing about the complaints under the GATT); Request to Join Consultations by the European Union, *China-Measures Concerning Wind Power Equipment*, WTO Doc. WT/DS419/2 (Jan. 12, 2011); Request to Join Consultations by Japan, *China-Measures Concerning Wind Power Equipment*, WTO Doc. WT/DS419/3 (Jan. 17, 2011).

its subsidy programs.⁹⁹ However, China retained some subsidy programs for domestic solar panel production. The United States has instituted steep “anti-dumping” tariffs against Chinese products receiving these subsidies to counter the prejudicial effect, pursuant to the SCM Agreement’s “actionable” subsidies provisions.¹⁰⁰

Although there is little definitive guidance on whether China’s solar subsidy programs was or is still in violation of the SCM Agreement, China’s voluntary elimination of some of its subsidies at least demonstrates the effects of the WTO rules on Member nation decision-making.¹⁰¹ The subsidies that China removed were probably “prohibited” under Article 3 because they unambiguously included financial benefits that were directly contingent on the use of domestic inputs. As such, China did not bother arguing that it complied and simply removed the clear SCM Agreement violations.¹⁰²

As for China’s remaining subsidies, the United States ITC determined for itself that the Chinese subsidies resulted in prejudice to the United States’ renewable energy market.¹⁰³ The United States acted pursuant to the “actionable” subsidies provisions of the SCM Agreement and imposed tariffs on the Chinese products to counteract the effect.¹⁰⁴ Although China successfully challenged the validity of some of the United States’ countervailing measures, they failed to establish that their remaining subsidies were not specific and actionable.¹⁰⁵ In the decisions regarding China’s complaint against the United States’ sanctions, the Panel and WTO Appellate Body merely urged the “United States [to] bring its measures into

99. Press Release, Office of the U.S. Trade Representative, *China Ends Wind Power Equipment Subsidies Challenged by the United States in WTO Dispute* (June 2011), *available at* <http://www.ustr.gov/about-us/press-office/press-releases/2011/june/china-ends-wind-power-equipment-subsidies-challenged>.

100. See Diane Cardwell, *U.S. Imposes Steep Tariffs on Chinese Solar Panels*, N.Y. TIMES (Dec. 16, 2014), <http://www.nytimes.com/2014/12/17/business/energy-environment/-us-imposes-steep-tariffs-on-chinese-solar-panels.html>; see also Keith Bradsher, *China Criticizes Steep U.S. Tariffs on Solar Panels*, N.Y. TIMES (Dec. 17, 2014), <http://www.nytimes.com/2014/12/18/business/energy-environment/china-criticizes-steep-us-tariffs-on-solar-panels.html>.

101. See Press Release, *China Ends Wind Power Equipment Subsidies*, *supra* note 99.

102. Deepa Badrinarayana, *Trading Up Kyoto: A Proposal to Amend the Protocol, Part 1*, 41 B.C. ENVTL. AFF. L. REV. 1, 36-37 (2014), <http://lawdigitalcommons.bc.edu/ealr/vol41/iss1/2> (“The fact that China agreed to withdraw the subsidy indicates that the United States’ prohibited subsidies claim might have been tenable.”).

103. *China Rejects U.S. Trade Ruling That Solar Imports Harm Industry*, BLOOMBERG NEWS (Dec. 4, 2011), <http://www.bloomberg.com/news/articles/2011-12-04/china-rejects-u-s-trade-panel-s-ruling-that-solar-imports-harm-industry>.

104. See *id.*

105. Appellate Body Report, *United States—Countervailing Duty Measures on Certain Products from China*, 13-14, WTO Doc. WT/DS437/AB/R (adopted Dec. 18, 2014) [hereinafter *U.S.—Countervailing Measures*], *available at* https://www.wto.org/english/tratop_e/dispu_e/437abr_e.pdf.

conformity with its obligations under that Agreement.”¹⁰⁶

1. *European Union, India, and others domestic content requirements*

Multiple EU countries, including Greece and Italy, adopted renewable energy feed-in tariff programs with domestic content requirements similar to Ontario’s before Ontario’s program was challenged.¹⁰⁷ In November 2012, China filed a request for dispute consultation in the WTO, in which it challenged the FIT programs under Articles I and III of the GATT, Article 2 of the TRIMs Agreement, and Article 3 of the SCM Agreement.¹⁰⁸ Japan requested to join the consultations shortly after China filed its request.¹⁰⁹ No agreement has yet been reached.¹¹⁰

India also sought to implement a subsidy program that contained similar requirements to use local suppliers.¹¹¹ On February 6, 2013, the United States filed a request with the WTO for dispute consultations.¹¹² Similar to the challenges discussed so far in this section, the United States challenged India’s subsidies under the same GATT, SCM Agreement, and TRIMs Agreement provisions.¹¹³ On February 24, 2016, a WTO panel issued a report in which it found, among other things, that India’s domestic content requirements “are not distinguishable in any relevant respect from the domestic content requirements previously examined under this provision [GATT Article III] by the Appellate Body in *Canada--Renewable Energy/Feed-In Tariff Program*.”¹¹⁴

B. *Applicability of the GATT Article XX Defenses*

The language of the agreements, combined with the application of their rules to Canadian, Chinese, Indian, and European subsidy programs, make clear that a Members’ program for renewable energy products cannot directly favor domestic

106. *Id.* at 14.

107. Request for Consultations by China, *European Union and Certain Member States—Certain Measures Concerning the Renewable Energy Generation Sector*, WTO Doc. WT/DS452/1 (Nov. 5, 2012), available at https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds452_e.htm.

108. *Id.*

109. *Id.*

110. *Id.*

111. Request for Consultations by the United States, *India—Certain Measure Relating to Solar Cells and Solar Modules*, WTO Doc. WT/DS456/1, (Feb. 24, 2016), available at https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds456_e.htm.

112. *Id.*

113. *Id.*

114. *Id.*

industry.¹¹⁵ If a Member's actions result in prejudice or injury to another Member's "like" market, it must cease its violating program or risk being sanctioned sans a valid defense. Although no Member has successfully defended its renewable energy measures, Members might succeed in the future using Article XX(b)—for measures that are "necessary to protect human, animal or plant life"—and Article XX(g)—for measures that relate to the "conservation of exhaustible natural resources."¹¹⁶

1. Article XX(b)

The exception for policies that are "necessary to protect human, animal or plant health or life" can likely apply to renewable energy measures intended to mitigate climate change. These measures must be "necessary."

To demonstrate a need to protect human, animal, or plant health, Members can consider evidence of a risk to health or life provided by scientific experts and reports.¹¹⁷ With respect to climate change, experts and reports galore support the resounding worldwide scientific consensus that global warming poses a threat to the health of humans and global ecosystems.¹¹⁸ The United Nations Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change (IPCC), both supported by scientists from around the world, recognize the dangers that greenhouse gas-induced climate change presents to health and life in terms of increased disease, destruction of coastlines and property, and deterioration of natural habitats, ecosystems, and agriculture.¹¹⁹ Because energy generation results in sixty percent of the world's greenhouse gas emissions, actions taken to increase the supply of zero-emission energy resources will certainly help to reduce the rate of greenhouse gas output and the associated impacts on climate change.¹²⁰ As long as a Member aims to mitigate greenhouse gas output and

115. See *infra* Sections II and III(A) for a discussion of the WTO rules and their application.

116. See, e.g., Paolo Davide Farah & Elena Cima, *The World Trade Organization, Renewable Energy Subsidies, and the Case of Feed-in Tariffs: Time for Reform toward Sustainable Development*, 27 GEO. INT'L ENVTL. L. REV. 515, 533 (2015) (discussing GATT Articles XX(b) & (g)).

117. *EC-Asbestos*, *supra* note 27.

118. See, e.g., Intergovernmental Panel on Climate Change, IPCC, Martin Parry et. al. eds., *Climate Change 2007: Impacts, Adaptation and Vulnerability, Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 7–22 (2007) [hereinafter *Contribution of Working Group II*], http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4_wg2_full_report.pdf; United Nations Conference on Environment and Development: Framework Convention on Climate Change, Preamble (June 4, 1992) [hereinafter UNFCCC]; Joint Science Academies' Statement: Global Response to Climate Change (2005), <http://www.nationalacademies.org/onpi/06072005.pdf>.

119. See *Contribution of Working Group II*, *supra* note 117, at 7–22; UNFCCC, *supra* note 117, Preamble.

120. See, e.g., *Renewable Energy Standards—Mitigating Global Warming*, UNION OF CONCERNED SCIENTISTS, http://www.ucsusa.org/clean_energy/smart-energy-solutions/increase-renewables/re

climate change with its policy, it might qualify for an exception under Article XX(b) provided that its implementation is “necessary” to accomplish such mitigation.¹²¹

Conditions for incentives in renewable energy markets that are tied to geographic origin or export performance are probably not “necessary” under Article XX(b). Challengers could easily point to “alternative measures” that are “either consistent or less inconsistent” with the GATT—specifically those that do not discriminate against foreign entities or unreasonably favor domestic industry.¹²² Although mitigating climate change is a possibly “vital” common interest, and measures taken in its pursuit should perhaps be given more leeway, Members can encourage renewable energy development without negatively impacting international trade.¹²³

2. Article XX(g)

Clean energy policies can probably qualify for an exception under Article XX(g) for reducing GHG emissions, similar to how the Clean Air Act regulations in *U.S.–Gasoline* were exempted because they reduced ozone emissions.¹²⁴ Renewable energy policies, like the regulations in *U.S.–Gasoline*, aim to conserve air quality, an “exhaustible natural resources.”¹²⁵ Increasing greenhouse gas concentrations damage the atmosphere’s suitability for stable ecosystems.¹²⁶ Air quality and many of Earth’s natural resources are threatened by unreasonably high greenhouse gas levels.¹²⁷ As long as a Member’s renewable energy development measure is

newable-energy.html#.VU0yJ_IViko (last visited April 30, 2015); see also Nancy Pfund & Ben Healey, *Should the Government Subsidize Alternative Energy?*, YALE SCHOOL OF MGMT. (Dec. 13, 2011), <http://insights.som.yale.edu/insights/should-government-subsidize-alternative-energy>.

121. See, e.g., *Clean Energy Standards*, CTR. FOR CLIMATE CHANGE AND ENERGY SOLS., <http://www.c2es.org/federal/policy-solutions/clean-energy-standards> (last visited April 20, 2015); see also Pfund & Healey, *supra* note 119.

122. *U.S.–Gasoline*, *supra* note 26, ¶ 6.20.

123. *EC–Asbestos*, *supra* note 27, ¶¶ 169, 172 (holding that “[t]he more vital or important [the] common interests or values’ pursued [are], the easier it would be to accept as ‘necessary’ measures designed to achieve those ends”). The Panel in *Canada–FIT* did not rule on the necessity of an Article XX(b) exception, but did hold that the primary goal of Ontario’s local content requirement served the primary goal of market capture and protection of domestic industry. See, e.g., *Canada–FIT Program*, *supra* note 82, at ¶¶ 7.7, 8.5, 8.9; See, e.g., Memorandum from the Minister of Energy to Colin Andersen, Chief Exec. Officer, Ontario Power Authority (Aug. 16, 2013), available at <http://powerauthority.on.ca/sites/default/files/page/DirectionAdministrativeMatters-renewables-Aug16-2013.pdf> (Ontario continues its Tariff program with a drastic cutback of its domestic use conditions).

124. *U.S.–Gasoline*, *supra* note 31; see INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, RENEWABLE ENERGY SOURCES AND CLIMATE CHANGE MITIGATION 7, 18–20 (Ottmar Edenhofer et al. eds., 2012) [hereinafter RENEWABLE ENERGY SOURCES AND CLIMATE CHANGE MITIGATION] (discussing the climate change mitigation aspects of clean energy and the resulting GHG emissions).

125. *Id.*

126. See RENEWABLE ENERGY SOURCES AND CLIMATE CHANGE MITIGATION, *supra* note 124.

127. See *U.S.–Shrimp–Turtle*, *supra* note 40, ¶¶ 132–134 (holding that sea turtles, living organisms, are natural resources).

“primarily aimed” at conserving a natural resource (whether it is air quality, humans, animals, and/or ecosystems), “reasonably related to” the aim, and with “even handed” incentives, those measures will probably fall within the subject matter of the GATT Article XX(g) exception.¹²⁸

A Member who seeks an exception under GATT Article XX must not only fall under the subject matter of one of the enumerated exceptions, but also must show that its policy does not “constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade” under the Article XX chapeau.¹²⁹ If trade measures include conditions such as export performance or local content quotas, induce trade restriction, or incidentally amount to discrimination against foreign Members, they will not be protected by Article XX’s exceptions for violations of either the GATT or TRIMs agreement. Renewable energy programs that violate the GATT or TRIMs Agreement might be exempt under Articles XX(b) and (g) if they do not prejudice other Members’ markets. If the program also amounts to a “specific” subsidy under the SCM Agreement, and is either “prohibited” or “actionable,” the program’s Member will likely have no defense.¹³⁰

The foregoing disputes and analysis are used in the next section to discuss ways that Member governments can avoid clashing with WTO constraints when constructing renewable energy policies.

IV. Avoiding Disputes: Renewable Energy Development for WTO Member Nations

Clearly, the WTO rules discussed so far in this article do not allow policies that discriminate against non-domestic markets on their face. Measures that impact the international market less overtly might survive under the rules, provided that they do not injure or cause “prejudice” to other Members, or do not unjustifiably discriminate or serve as “disguised restriction[s] on international trade.”¹³¹ Member governments must consider these rules and their application when constructing policies of any sort. The following discussion could be applied to policymaking generally, but it is intended to cater to some unique features of the renewable energy market. Measures actively aimed at avoiding discrimination that also incentivize manufacturers and support fossil fuel service industries will realize the most success

128. *Id.* at ¶ 141; *U.S.–Gasoline Appellate Report*, *supra* note 32, at 20–21.

129. GATT, *supra* note 11, art. XX.

130. See *supra* note 55 for a discussion of the GATT Article XX’s applicability, or, more likely, non-applicability, to the SCM Agreement.

131. See *supra* Sections II and III above discussing rules under the GATT, SCM, and TRIMs Agreements.

in terms of both increasing renewable energy generation and avoiding WTO disputes.

A. Measures that do not Discriminate

Member governments can craft renewable energy policies that incentivize renewable energy production generally, with absolutely no discrimination against foreign markets in phrasing, intention, or effect. Obviously, policymakers should keep in mind the potential downstream consequences of conditions they place on any incentives, benefits, regulations, taxes, or subsidies to ensure neutrality. The “national” and “most-favoured nation” treatment principles discussed in Sections II and II should always guide decision-making. Unintended effects in foreign markets might subject specific subsidies to sanctions under the SCM or another agreement, so Members should take care to avoid incidental market impacts and consider contingency plans to assuage the concerns of other Members. Renewable energy is a relatively young industry, so market shifts in one country can often affect prices globally.¹³² As such, renewable energy policy development should always include an analysis of any potential “injury” or “prejudice” to the international market in order to prevent WTO violations.

If climate change mitigation was the only goal, it would not matter from whom developers purchase their supplies. However, governments often favor domestic industries with subsidies or regulatory favoritism in order to bolster economic stability, create jobs, protect “infant industries,” and prompt market shifts.¹³³ Domestic content requirements, a tool used for many industries, are one type of favoritism that can be substituted with more straightforward measures aimed directly at renewable energy manufacturers.¹³⁴

B. Measures Focused on Manufacturing

As noted above, requiring the use of domestic manufacturers helps grow and fuel a nation’s own economy. Due to of these benefits, governments are less likely to

132. Michaela D. Platzer, U.S. *Solar Photovoltaic Manufacturing: Industry Trends, Global Competition, Federal Support*, CONGRESSIONAL RESEARCH SERVICE 1–5 (Jan. 27, 2015), <https://www.fas.org/sgp/crs/misc/R42509.pdf>.

133. Sherry M. Stephenson, *Addressing Local Content Requirements: Current Challenges and Future Opportunities*, INT’L CTR. FOR TRADE AND SUSTAINABLE DEV., (July 25, 2013), <http://www.ictsd.org/bridges-news/biores/news/addressing-local-content-requirements-current-challenges-and-future> (governments are less likely to subsidize industries that rely on foreign manufactured technology).

134. *Id.*

subsidize industries that rely on foreign manufactured technology.¹³⁵ However, these benefits still might be realized by directly shifting aid from developers to the supporting suppliers, with the added benefit of avoiding the high risk of sanctions under WTO rules.

By providing incentives to the manufacturers of renewable energy components, rather than the manufacturing facilities that put everything together, Member governments can increase domestic component supply. This would serve to increase local availability and likely decrease the costs for developers downstream.¹³⁶ As the renewable energy market matures and supplies become more widely available in domestic markets, developers might rely on domestic content on their own accord. Until such maturation occurs, governments can help local manufacturers achieve competitive status in the global market. For example, governments can provide subsidies, low interest loans, low cost land grants, streamlined permitting, or reductions in regulatory duties to encourage new participants to enter the market or to help current market participants expand to reach economies of scale and further decrease downstream prices.¹³⁷

Of course, policymakers must avoid over-incentivizing manufacturers so as to artificially deflate component prices to the extent that foreign competition will be prejudiced. For example, China's solar and wind manufacturing subsidies are probably "actionable" under the SCM Agreement because of such price deflation.¹³⁸ Even if a program is narrowly drawn enough to qualify for an Article XX exception that would otherwise violate the GATT or TRIMs Agreement, an action that would qualify as a "specific subsidy" under the SCM agreement will likely be removed from such an exception.¹³⁹ Other Members might be able to impose "countervailing" sanctions commensurate with any level of incidental "prejudice" to other markets.¹⁴⁰

C. Measures Aimed at Services

Member nations might help develop their domestic or local renewable energy

135. *See id.*

136. *See* China Petition, *supra* note 62 and accompanying text for an example of manufacturing subsidies driving component prices down.

137. Richard J. Campbell, *China and the United States—A Comparison of Green Energy Programs and Policies*, CONGRESSIONAL RESEARCH SERVICE 7 (April 30, 2014), available at <https://www.fas.org/sgp/crs/row/R41748.pdf> (China offers subsidized interest rates and tax benefits for renewable energy projects to boost the industry).

138. *Id.*

139. *See supra* note 55.

140. *See* China Petition, *supra* note 62. Although some of China's renewable subsidies are probably "actionable" under the SCM, the United States' countervailing duties were inordinately strict given the level of injury resulting from the subsidies, as was determined by the WTO Panel. *U.S.—Countervailing Measures*, *supra* note 105.

industry by granting benefits to renewable energy service providers. Discriminating against foreign companies that provide services domestically would still violate the “national treatment” and “most-favoured nation” treatment standards under the GATS.¹⁴¹ However, discrimination and domestic favoritism in service industries do not carry the same benefits as they do in product markets. Service providers that support domestic renewable energy industries are often domestic entities too—even if not, providing benefits to all service providers who act within a Member’s borders will still benefit the domestic economy and often provide employment to domestic residents.¹⁴² Subsidizing or providing other advantages to service providers would help decrease the input costs of renewable energy development and accelerate growth of the domestic industry.

D. Measures Aimed at the Competing Market

Although renewable industries—particularly the wind and solar industries—are expanding rapidly, the fossil energy industry is still enormous in comparison.¹⁴³ Some stakeholders have called for global changes in energy subsidization, but national and sub-national governments can still do their part to accelerate the shift to renewable fuels.¹⁴⁴ The International Energy Agency calculated that the global renewable energy market in 2013 received less than one-fourth of the nearly \$550 billion in subsidies the fossil fuel industry’s received the same year.¹⁴⁵ Governments could close this gap in state support by eliminating fossil fuel subsidies rather than creating new subsidies for renewables.

As fossil fuel prices continue to drop—and even if they do not continue—a shift in priority for subsidies is necessary for short-term renewable energy growth to levels

141. GATT, *supra* note 11, arts. XVII, II.

142. Brian Bandell, *Foreign Companies Spur South Florida Job Growth*, S. FLA. BUS. J. (Jun. 20, 2014), <http://www.bizjournals.com/southflorida/blog/morning-edition/2014/06/foreign-companies-spur-south-florida-job-growth.html>; Matthew J. Slaughter, *How U.S. Multinational Companies Strengthen the U.S. Economy*, U.S. COUNCIL FOUND. (2009), available at http://www.uscib.org/docs/foundation_multinationals.pdf; Gross Domestic Product as a Measure of U.S. Production, SURVEY OF CURRENT BUS. 8 (Aug. 1991), <http://www.bea.gov/scb/pdf/national/nipa/1991/0891od.pdf>, (products produced within U.S. borders contribute to GDP, services support such production).

143. *Why Fossil Fuel Divestment Won't be Easy*, CARBON BRIEF (Aug. 8, 2014), <http://www.carbon-brief.org/why-fossil-fuel-divestment-wont-be-easy> (fossil fuels supported a \$4.65 trillion industry in 2014 compared to the \$220 billion clean energy’s industry.)

144. See Lewis, *supra* note 12, at 18.

145. *World Energy Outlook--Energy Subsidies*, INT’L ENERGY AGENCY (2013), <http://www.worldenergyoutlook.org/resources/energysubsidies/>; Lauren Stanford, *Fossil Fuel and Renewable Energy Subsidies*, CLEAN ENERGY ACTION (2013), <http://www.cleanenergyaction.org/2013/07/26/fossil-fuel-and-renewable-energy-subsidies/>.

needed to reach global climate change mitigation goals.¹⁴⁶ Even though some renewable energy costs are approaching parity with energy produced by fossil fuels, Member governments who wish to increase renewable energy production would do well to minimize the governmental benefits that flow to the renewable industry's competitor, fossil fuels.¹⁴⁷ Policymakers might realize some or all of their market shifting goals simply by eliminating existing subsidies and government stimulation for the fossil fuel industry.¹⁴⁸ Rather than draw scrutiny to new renewable energy policies that might conflict with WTO rules, Member governments might avoid the issue altogether and focus on obtaining a relative market advantage for renewable energy and its supporting industries.

V. Conclusion

Increased renewable energy generation is a primary goal for those interested in mitigating the risks posed by climate change. Recent challenges in the WTO show that not all renewable energy policies will be subject to scrutiny. Policymakers who aim to instigate renewable energy development must learn from the WTO's application of its rules. Policies that aim for neutrality, support for manufacturers, subsidies for service providers, and decrease in fossil fuel subsidies will likely evade scrutiny in the WTO and achieve their goal of encouraging renewable energy development.

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146. Julia Mitusova, *Oil Prices: The Winners, the Losers, and Geopolitical Drivers of Change*, PULSE (Oct. 19, 2015), <https://www.linkedin.com/pulse/oil-prices-winners-losers-geopolitical-drivers-change-mitusova-mba?trk=hp-feed-article-title-like>; Thomas Day, et al., *What the Paris Agreement Means for Global Climate Change Mitigation*, NEW CLIMATE INSTITUTE (Dec. 14, 2015), <http://www.newclimate.org/2015/12/14/what-the-paris-agreement-means-for-global-climate-change-mitigation/> (discussing the goal of keeping global warming to two degrees Celsius or below, and the most recent international convention on reaching that goal).
147. *Solar Power to Reach Price Parity with Fossil Fuels by 2016, Says Deutsche Bank*, PLANET EXPERTS (Oct. 30, 2014), <http://www.planetexperts.com/solar-power-reach-price-parity-fossil-fuels-2016-says-deutsche-bank/>.
148. Laura Merrill, *Eliminating Fossil Fuel Subsidies Still on the Agenda—the International Community Must now Walk the Talk*, INT'L INST. FOR SUSTAINABLE DEV. (July 20, 2015), http://www.iisd.org/gsi/Eliminating_Fossil_Fuel_Subsidies_Still_on_the_Agenda; Shelagh Whitley, *Time to Change the Game: Fossil Fuel Subsidies and Climate*, OVERSEAS DEVELOPMENT INST. (2013), available at <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8668.pdf>.